

Two new species of *Brickellia* (Asteraceae: Eupatorieae) from Mexico

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ABSTRACT

Two new species are described from Mexico, *Brickellia atarjea* B.L. Turner, **sp. nov.**, (Guanajuato, Queretaro and Hidalgo), and *Brickellia serboana* B.L. Turner, **sp. nov.**, of Oaxaca. The former is related to the widespread *B. secundiflora*, the latter to *B. orizabensis*. Photographs of the types are provided, along with distribution maps of the taxa concerned. Published on-line www.phytologia.org *Phytologia* 95(3): 246-251 (August 1, 2013).

KEY WORDS: Asteraceae, Eupatorieae, *Brickellia*, Mexico, Guanajuato, Hidalgo, Queretaro, Oaxaca

Routine identification of Mexican Asteraceae has revealed the following novelties:

BRICKELLIA ATARJEA B.L. Turner, **sp. nov.** Fig. 1

Resembling *Brickellia secundiflora* (Lag.) A. Gray but the heads fewer, larger (ca. 2 cm high and as wide), more numerous florets (40-60 vs 8-25) on longer peduncles, the outer involucre bracts broadly ovate, these set off from the more linear-lanceolate innermost series.

Stiffly erect suffruticose herbs, 0.5-1.0 m high. **Mid-stems** crinkly-pubescent with short hairs 0.2-0.6 mm high, or densely glandular-pubescent throughout. **Leaves** broadly ovate to cordate, 5-7 cm long, 3.5-5.0 cm wide; petioles mostly 5-12 mm long; blades markedly reticulate-venose beneath, coarsely pubescent throughout, mainly along the veins, the margins crenulate. **Heads** axillary, 1-3 to a node, the ultimate peduncles 1-5 cm long, crinkly-pubescent or glandular-pubescent. **Involucres** 6-7 seriate, markedly imbricate, ca 15 mm high, the outer series broadly ovate, grading into the more lanceolate inner series. **Receptacles** plane to convex, 2.5-4.0 mm across, pubescent with white hairs 0.5-1.5 mm long. **Florets** 40-60 (estimated); corollas slender, 8-9 mm long, reportedly "amarillas," "blancas," or "moradas," the lobes ca 0.5 mm long. **Styles** with bases enlarged, densely pubescent; branches slender, ca 5 mm long. **Achenes** 9-ribbed, 5-6 mm long, pubescent throughout with appressed hairs; pappus of 20-25 short-pectinate awns or bristles 7-9 mm long.

TYPE: MEXICO. GUANAJUATO: Mpio. de Atarjea, Cerro Pichardo, "bosque de pino, ladera de cerro," 2100 m, 2 Oct 1990, *E. Ventura* y *E. Lopez* 8842 (Holotype: TEX).

ADDITIONAL SPECIMENS EXAMINED: MEXICO. HIDALGO: Mpio. Ajacuba, Cerro Los Aguilares, NW del poblado Santiago Tezontlale, Sierra del "Mexe," 2650 m, 4 Nov 1989, *Diaz* 724 (TEX). **QUERETARO: Mpio. San Joaquin**, "Ruinas las Ranas," 2 km al N de San Joaquin, 2300 m, 14 Nov 1993, *Fernandez N.* 4867 (TEX).

Brickellia atarjea will key to or near *B. secundiflora* in my treatment of *Brickellia* for Mexico (Turner 1997). The several sheets described herein are readily distinguished from the latter by their larger heads on mostly longer ultimate peduncles. It is possible that the Fernandez collection from Queretaro represents an undescribed taxon since the pubescence is predominantly glandular-pubescent (spreading crinkly hairs mostly absent), and the specimen has heads that are less markedly biseriate (the outer series grading more perceptively into the inner series); conversely, the specimen might also prove to be a hybrid derivative of *B. secundiflora*, populations of which occur in the area. Regardless, all of the cited sheets

differ significantly from the large number of other sheets of *B. secundiflora* (including its 4 varieties) on file at LL-TEX (as mapped by Turner 1989). Distributions of the two sympatric taxa concerned are shown in Fig. 3 and Fig. 4.

The name derives from the Municipio de Atarjea, Guanajuato, whence the type.

BRICKELLIA SERBOANA B.L. Turner, *sp. nov.* **Fig. 2**

Resembling *Brickellia orizabensis* Klatt but the leaves ovate-lanceolate, 3-5 times as long as wide (vs broadly ovate, 1-2 times as long as wide; petioles 3-6 mm long (vs 10-50 mm), florets mostly 25-30 per head (vs 15-20); achenes viscid, pubescent with minute glandular trichomes (vs not so).

TYPE: MEXICO. OAXACA: Mpio. Santo Domingo Tonola, Paraje "Amates Amarillos" Guamil, sobre cerro, ca 1634 m, 17 39 57.7 N, 97 56 36.6 W, 15 Oct 2008, *Armando Torres Hernandez 499* [con L. Hernandez]. (Holotype: TEX).

Suffruticose herbs, or shrublets to 1 m high. **Mid-stems** ca 4 mm thick, purplish, glabrate. **Leaves** mostly opposite (rarely not), 3-7 cm long, 1-3 cm wide; petioles 3-6 cm long, more or less winged; blades ovate-lanceolate, glabrous, weakly 3-nerved near the base. **Capitulescence** a terminal, numerous-headed, cymose-panicle ca 30 cm high, 20 cm across. **Heads** (in fruit) ca 15 mm high, 20 mm across, the peduncles mostly 5-10 mm long, minutely puberulent with up curved hairs. **Involucral bracts** glabrous, 2-3 seriate, gradate, the inner series oblanceolate, 5-7 mm long, apices acute to obtuse. **Receptacle** plane, epaleate, glabrous, ca 3 mm across. **Florets** 25-30 per head; corollas white, 5-6 mm long, glabrous, 5-lobed. **Achenes** ca 5 mm long, 8-9 ribbed, both viscid and pubescent with minute glandular trichomes, mostly along the ribs; pappus of ca 45 tawny, ciliate, bristles 5-8 mm long.

In my treatment of *Brickellia* for the Comps of Mexico (Turner 1997), this novelty will not key to a given taxon, but it will "feather-out" somewhere in the vicinity of *B. orizabensis*. It is similar to the latter in leaf arrangement, habit and capitulescence, but differs markedly in having ovate-lanceolate, glabrous leaves with very short winged petioles, and remarkably viscid achenes, these possessing minute glandular-trichomes, as called to the fore in the above diagnosis. Distribution of the two taxa is shown in Fig. 5.

The name is an anagram derived from Sociedad para el Estudio de los Recursos Bioticos de Oaxaca (SERBO), who provided funds for the assemblage concerned.

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LITERATURE CITED

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Turner, B.L. 1997. *Brickellia*, in Comps of Mexico, Eupatorieae. Vol. 1. *Phytologia Memoirs* 11: 56-84.



Fig. 1. Holotype of *Brickellia atarjea*.



Fig. 2. Holotype of *Brickellia serboana*.

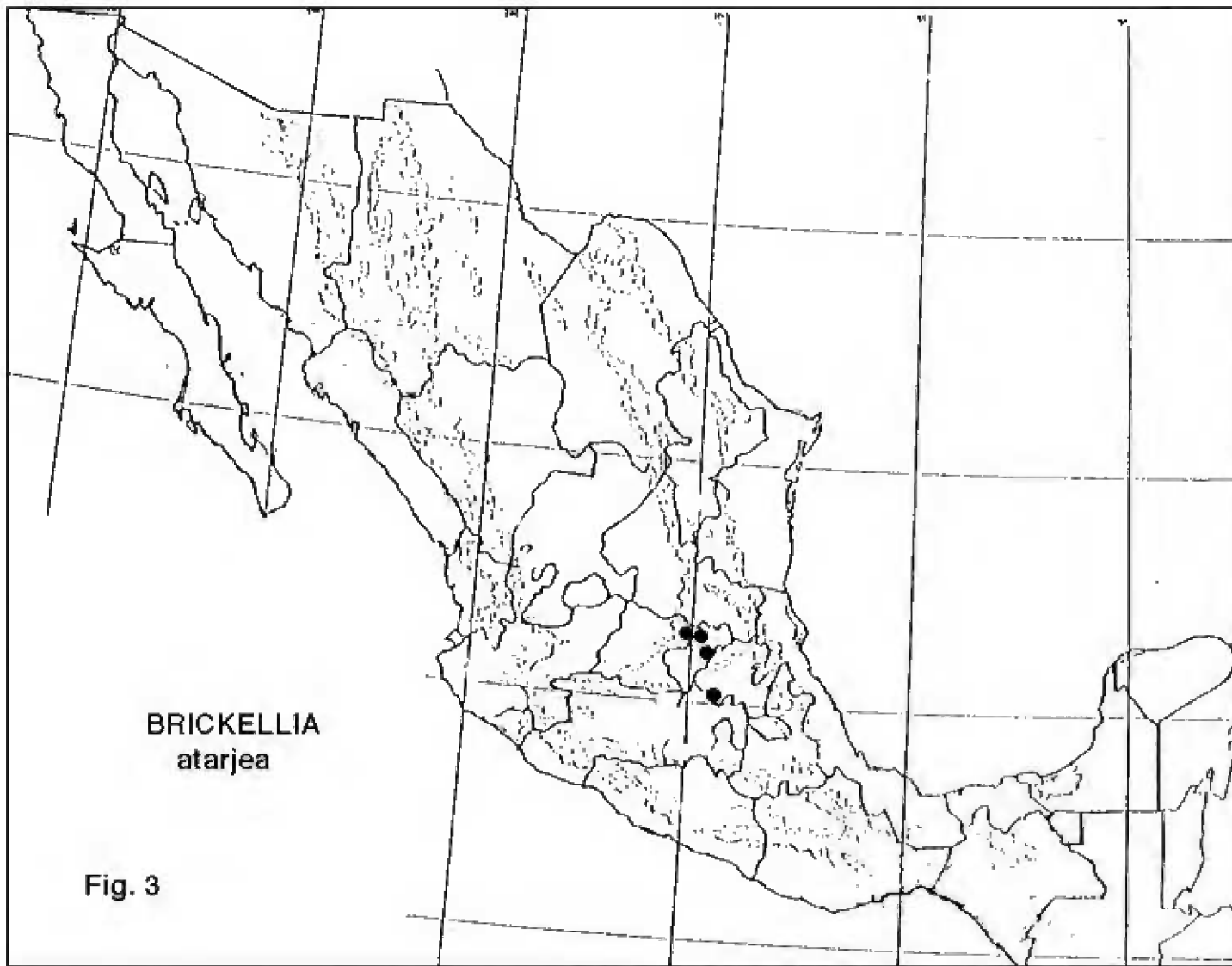


Fig. 3. Distribution of *Brickellia atarjea*.

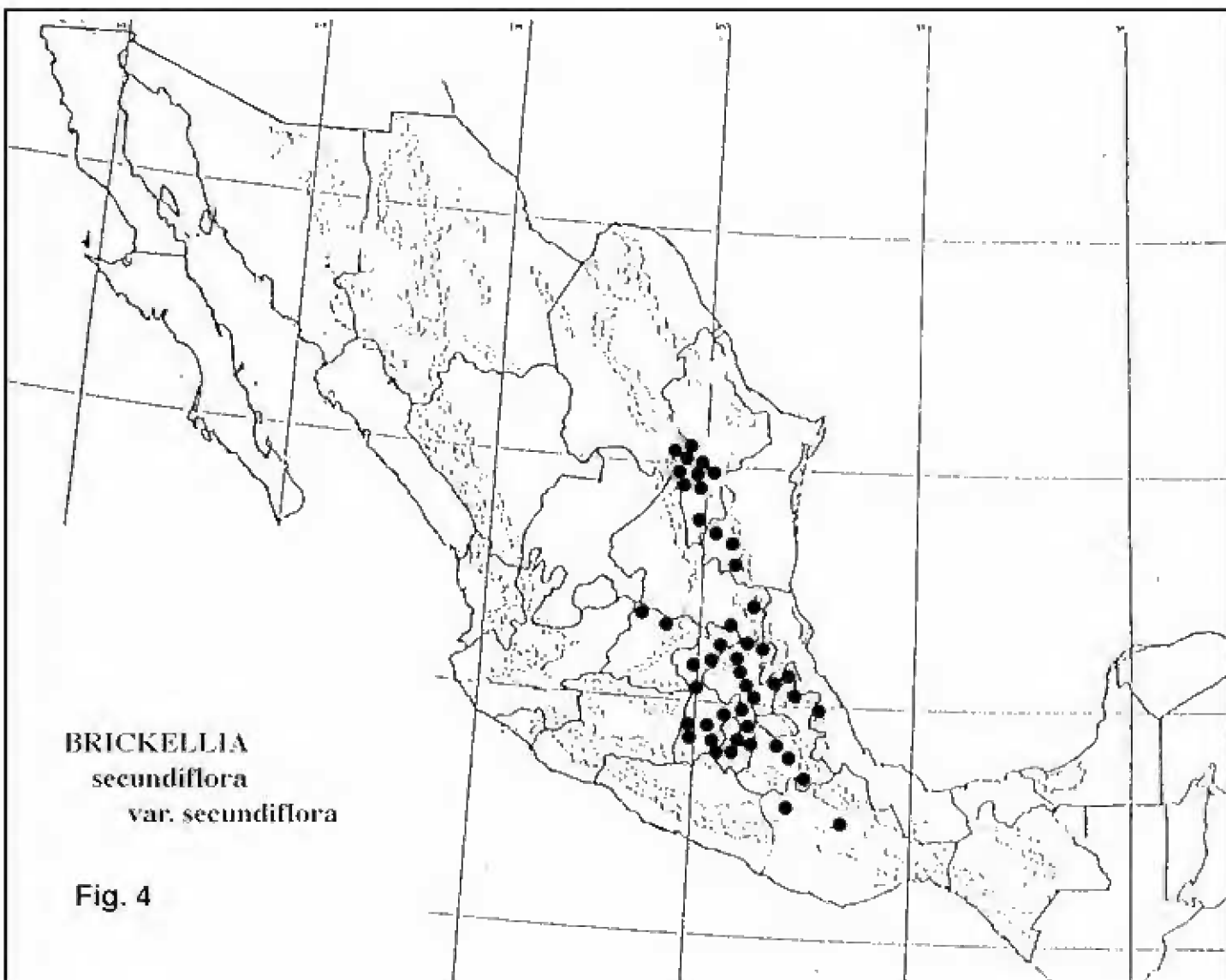


Fig. 4. Distribution of *Brickellia secundiflora* var. *secundiflora*.

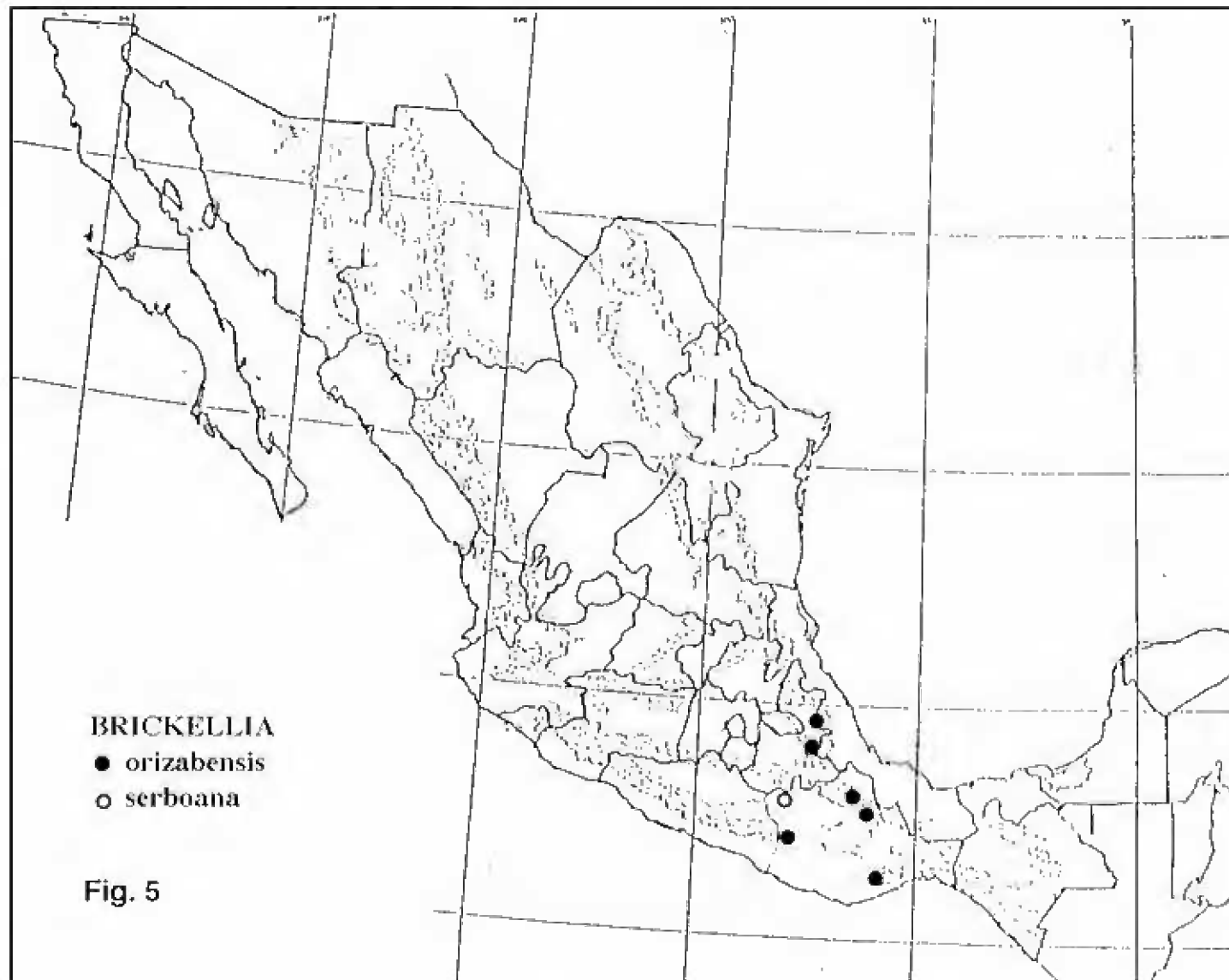


Fig. 5. Distribution of *Brickellia serboana* and *B. orizabensis*.